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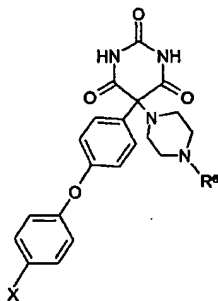
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(54) Title: **IMPROVED IMAGING AGENTS COMPRISING BARBITURIC ACID DERIVATIVES**



(57) ~~Abstract~~ The present invention relates to diagnostic imaging agents for in vivo imaging. The imaging agents comprise a synthetic barbituric acid derivative labelled at the 5-position with an imaging moiety suitable for diagnostic imaging in vivo. The invention also provides pharmaceutical and radiopharmaceutical compositions comprising the imaging agents, together with kits of the preparation of the radiopharmaceuticals. Also described are chelator conjugates of the barbituric acid derivative, which are suitable for the preparation of imaging agents comprising a radioactive or paramagnetic metal ion. The imaging agents are useful for the diagnostic imaging in vivo of various disease states, including atherosclerosis.

Compound	X	R'
2 (prior art)	Br	-CH ₂ CH ₂ OH
3 (prior art)	OCH ₃	-CH ₂ CH ₂ OH
4	I	-CH ₂ CH ₂ OH
5	¹²⁵ I	-CH ₂ CH ₂ OH
6	Br	H
7	Br	-CH ₂ CH ₂ CH ₂ F
8	Br	-CH ₂ CH ₂ CH ₂ ¹⁸ F
9	Br	-(CO)CH ₂ S(CH ₂) ₃ F
10	Br	-(CO)CH ₂ S(CH ₂) ₃ ¹⁸ F
11	Br	-(CO)CH ₂ Cl
12	Br	-CH ₂ CH ₂ NH ₂
13	Br	-CH ₂ CH ₂ Br
14	Br	-CH ₂ CH ₂ CO ₂ H
15	Br	-(CH ₂) ₂ NHCO(CH ₂) ₂ CO ₂ H
16	Br	-(CH ₂) ₂ CO-[Chelator 1]
17	Br	-(CH ₂) ₂ NHCO(CH ₂) ₂ CO-[Chelator 1]
18	SnBu ₃	-CH ₂ CH ₂ OH
19	Br	-C ₆ H ₄ -4-NO ₂
20	Br	-C ₆ H ₄ -4-F
21	Br	-C ₆ H ₄ -4-SiMe ₃
22	Br	-C ₆ H ₄ -4-I



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